

Description

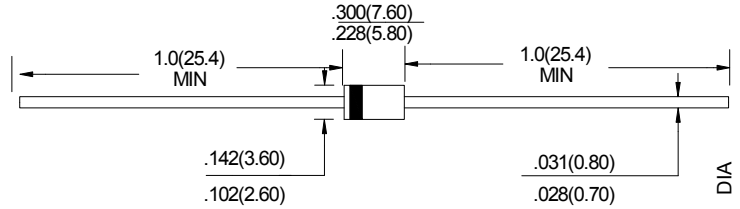
The RP1HG is a high voltage fast recovery diode of 2000 V / 0.1 A. The maximum t_{rr} of 100 ns is realized by optimizing a life-time control.

Features

- V_{RM} -----2000 V
- $I_{F(AV)}$ -----0.1 A
- V_F -----7.0 V
- t_{rr1} -----100 ns
- Bare Leads: Pb-free (RoHS Compliant)

Package

DO-15



Unit: in inches (millimeters)

Applications

- Sunuber Diode
(Flyback Converter, etc.)

Absolute Maximum Ratings

Unless otherwise specified, $T_A = 25^\circ\text{C}$

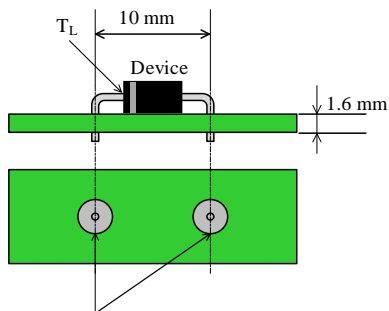
Parameter	Symbol	Rating	Unit	Conditions
Peak Repetitive Reverse Voltage	V_{RSM}	2000	V	
Repetitive Reverse Voltage	V_{RM}	2000	V	
Average Forward Current	$I_{F(AV)}$	0.1	A	See Figure 2 and Figure 3
Surge Forward Current	I_{FSM}	5	A	Half cycle sine wave, positive side, 10 ms, 1 shot
I^2t Limiting Value	I^2t	0.125	A^2s	$1\text{ ms} \leq t \leq 10\text{ ms}$
Junction Temperature	T_J	-40 to 150	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-40 to 150	$^\circ\text{C}$	

Electrical Characteristics

Unless otherwise specified, $T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	V_F	$T_J = 25^\circ\text{C}, I_F = 0.1\text{ A}$	—	—	7.0	V
		$T_J = 100^\circ\text{C}, I_F = 0.1\text{ A}$	—	2.0	—	V
Reverse Leakage Current	I_R	$V_R = V_{RM}$	—	—	2	μA
Reverse Recovery Time	t_{rr1}	$I_F = I_{RP} = 100\text{ mA}$ 90% recovery point, $T_J = 25^\circ\text{C}$	—	—	100	ns
	t_{rr2}	$I_F = 100\text{ mA},$ $I_{RP} = 200\text{ mA},$ 75% recovery point, $T_J = 25^\circ\text{C}$	—	—	50	ns
Thermal Resistance ⁽¹⁾	$R_{th(J-L)}$	See Figure 1	—	—	15	$^\circ\text{C/W}$

⁽¹⁾ $R_{th(J-L)}$ is thermal resistance between junction and lead.



Diameter of soldering area: ϕ 3 mm Copper thickness: 50 μ m

Figure 1 Lead Temperature Measurement Conditions

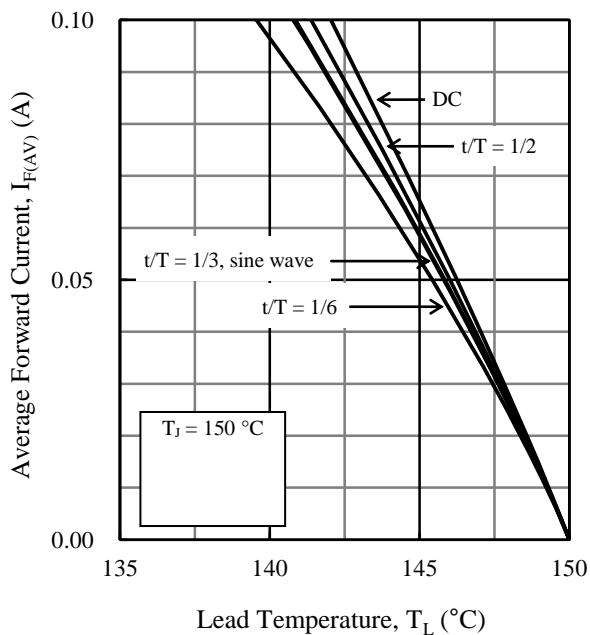


Figure 2. $I_{F(AV)}$ vs. T_L Typical Characteristics⁽²⁾
($V_R = 0$ V)

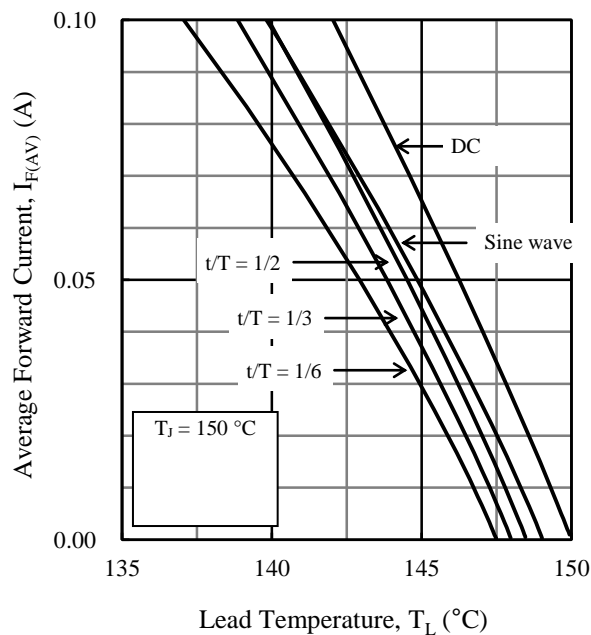


Figure 3. $I_{F(AV)}$ vs. T_L Typical Characteristics⁽²⁾
($V_R = 2000$ V)

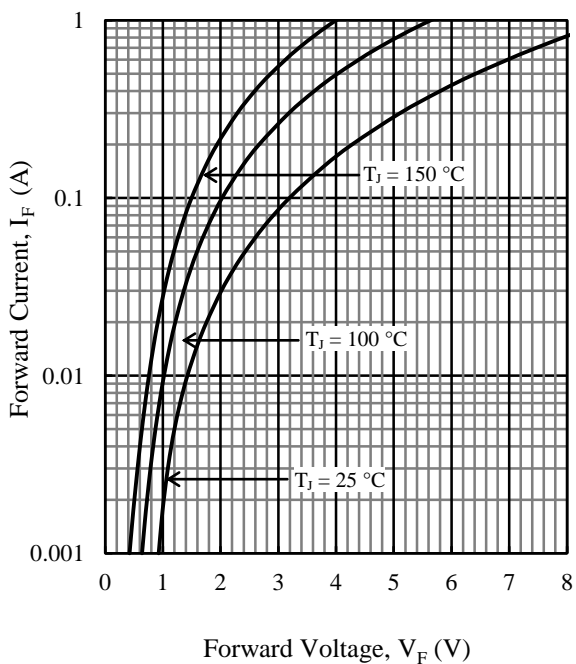


Figure 4. V_F vs. I_F Typical Characteristics

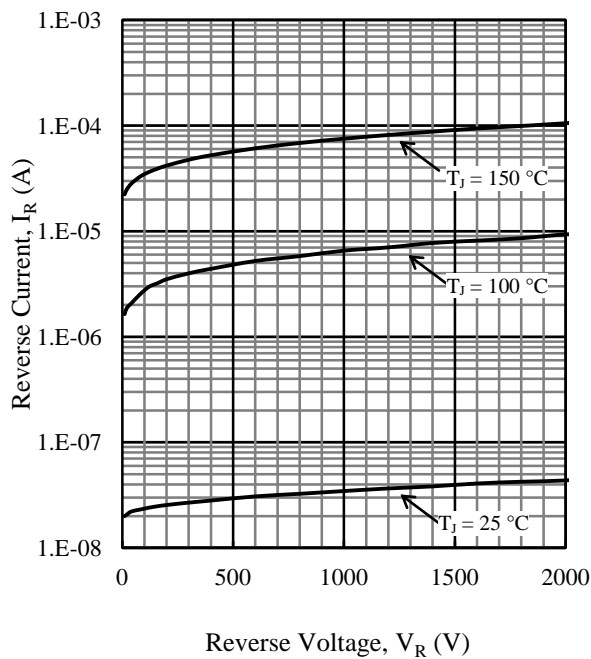


Figure 5. V_R vs. I_R Typical Characteristics

⁽²⁾ See Figure 1 for the lead temperature measurement conditions.

Disclaimer

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